UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

23 DEC 2002

asp

Site: Griffin Pipe
ID #: IAD022279414CE
Break: 1, 3
Other: 12-23-02

Richard Hansen, P.E.
Environmental Engineer
Griffin Pipe Products Company
2601 Ninth Avenue
Council Bluffs, Iowa 51501

Dear Mr. Hansen:

RE: 9th Avenue Oil Spill

Enclosed are the analytical results from the environmental sampling that was performed on November 26, 2002, by the Environmental Protection Agency (EPA). You will notice that the enclosure has clear individual explanations for each sample result. The Griffin Pipe Company sample was GPC001, and the sample taken from the creek mouth as it empties into the Missouri River is MORIVER 001.

I am sure that at this point you are aware that the Iowa Department of Natural Resources has the lead concerning any future actions or steps. The state point of contact is Mr. Kirk Mathis, telephone number (712) 243-1934.

If you have any additional questions or need further clarification, please do not hesitate to call me at (913) 551-7600. I appreciate your assistance during the EPA response action and found the tour of your facility to be interesting.

Sincerely,

Daniel J. Garvey

Daniel J. Garvey
On-Scene Coordinator/Region 7
Enforcement/Fund Lead Removal Branch
Superfund Division

Enclosure

40042374
SUPERFUND RECORDS

RECYCLE
PAPER CONTAINS RECYCLED FIBERS

FRIEDMAN & BRUYA, INC.
ENVIRONMENTAL CHEMISTS

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December 4, 2002

[redacted], Project Manager
Tetra Tech EM Inc.
8030 Flint Street
Lenexa, KS 66214

Dear [redacted]:

Included are the results from the testing of material submitted on November 27, 2002 from your 9th Avenue Oil Spill project. The water samples submitted for forensic evaluation arrived in good condition. Upon their arrival, the samples MORIVER 001, GPC 001, 7th Ave 001, BK-001, MORIVER 002, and MORIVER 003 were assigned our laboratory project number 211192 and were placed in a refrigerator maintained at 4°C until removed for sample processing.

The samples MORIVER 001, GPC 001, 7th Ave 001, and BK-001 were extracted and analyzed using a gas chromatograph with a flame ionization detector (GC/FID) and an electron capture detector (ECD). The data generated yielded information on the boiling range and general chemical composition of the material present. The GC/FID and GC/ECD traces are enclosed. A GC/FID trace of a standard consisting of normal alkanes is also provided for reference purposes.

In addition, the sample MORIVER 002 was analyzed for total petroleum hydrocarbons as diesel (TPH-D) using GC/FID. The sample MORIVER 003 was analyzed for total petroleum hydrocarbons as gasoline (TPH-G) using GC/FID, as well as for select volatile organic compounds (VOC's) using a GC fitted with a mass spectrometer (MS). The results of this testing, including the associated quality assurance, are also enclosed.

Please contact us if additional consultation is needed by our firm in the interpretation of the analytical results provided. We appreciate this opportunity to be of service to you and hope you will call if you should have any questions. We will hold your samples for 30 days before disposal unless directed otherwise.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michele Triviño Costales

Michele Triviño Costales
Chemist

Enclosures
NAA120-LR.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/04/02
Date Received: 11/27/02
Project: 9th Avenue Oil Spill
Date Extracted: 11/27/02
Date Analyzed: 11/27/02

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR FORENSIC EVALUATION BY CAPILLARY GAS CHROMATOGRAPHY USING A FLAME IONIZATION DETECTOR (FID) AND ELECTRON CAPTURE DETECTOR (ECD)

Sample ID	GC Characterization
MORIVER 001	The GC trace using the flame ionization detector (FID) showed the presence of high boiling compounds. The material present in this sample is consistent with a high boiling product such as hydraulic oil, lube oil, and similar materials. The high boiling compounds appear as an irregular pattern of peaks on top of a broad hump or unresolved complex mixture (UCM). This material elutes from *n*-C_{16} to *n*-C_{36} showing a maximum near *n*-C_{26}. This correlates with a temperature range of approximately 290°C to 500°C with a maximum near 410°C. The large peak seen near 25 minutes on the GC/FID trace is pentacosane, added as a quality assurance check for this GC analysis. There is a second surrogate present that is seen on the GC/ECD trace at about 26 minutes which is dibutyl chlorendate.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/04/02
Date Received: 11/27/02
Project: 9th Avenue Oil Spill
Date Extracted: 11/27/02
Date Analyzed: 11/27/02

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR FORENSIC EVALUATION BY CAPILLARY GAS CHROMATOGRAPHY USING A FLAME IONIZATION DETECTOR (FID) AND ELECTRON CAPTURE DETECTOR (ECD)

Sample ID	GC Characterization
GPC 001	The GC trace using the flame ionization detector (FID) showed the presence of high boiling compounds. The material present in this sample is consistent with a high boiling product such as hydraulic oil, lube oil, and similar materials. The high-boiling compounds appear as an irregular pattern of peaks on top of a broad hump or unresolved complex mixture (UCM). This material elutes from *n*-C_{16} to *n*-C_{36} showing a maximum near *n*-C_{24}. This correlates with a temperature range of approximately 290°C to 500°C with a maximum near 390°C. The large peak seen near 25 minutes on the GC/FID trace is pentacosane, added as a quality assurance check for this GC analysis. There is a second surrogate present that is seen on the GC/ECD trace at about 26 minutes which is dibutyl chlorendate.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/04/02
Date Received: 11/27/02
Project: 9th Avenue Oil Spill
Date Extracted: 11/27/02
Date Analyzed: 11/27/02

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR FORENSIC EVALUATION BY CAPILLARY GAS CHROMATOGRAPHY USING A FLAME IONIZATION DETECTOR (FID) AND ELECTRON CAPTURE DETECTOR (ECD)

Sample ID	GC Characterization
7th Ave 001	The GC trace using the flame ionization detector (FID) showed the absence of low, medium, and high boiling compounds. The detection limits for this analysis are 50, 100, and 250 ppm for gasoline, diesel, and motor oil, respectively. The large peak seen near 25 minutes on the GC/FID trace is pentacosane, added as a quality assurance check for this GC analysis. There is a second surrogate present that is seen on the GC/ECD trace at about 26 minutes which is dibutyl chlorendate.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/04/02
Date Received: 11/27/02
Project: 9th Avenue Oil Spill
Date Extracted: 11/27/02
Date Analyzed: 11/27/02

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR FORENSIC EVALUATION BY CAPILLARY GAS CHROMATOGRAPHY USING A FLAME IONIZATION DETECTOR (FID) AND ELECTRON CAPTURE DETECTOR (ECD)

Sample ID	GC Characterization
BK-001	The GC trace using the flame ionization detector (FID) showed the absence of low, medium, and high boiling compounds. The detection limits for this analysis are 50, 100, and 250 ppm for gasoline, diesel, and motor oil, respectively. The large peak seen near 25 minutes on the GC/FID trace is pentacosane, added as a quality assurance check for this GC analysis. There is a second surrogate present that is seen on the GC/ECD trace at about 26 minutes which is dibutyl chlorendate.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/04/02
Date Received: 11/27/02
Project: 9th Avenue Oil Spill
Date Extracted: 11/27/02
Date Analyzed: 11/30/02

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING EPA METHOD 8015M

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 78-119)
MORIVER 003 d 211192-00	<250	83
Method Blank	<50	82

d - The sample was diluted due to matrix effect (foamy) Detection limits are raised due to dilution.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/04/02
Date Received: 11/27/02
Project: 9th Avenue Oil Spill
Date Extracted: 11/27/02
Date Analyzed: 11/27/02

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{24})	Surrogate (% Recovery) (Limit 45-147)
MORIVER 002 d 211192 01	1,300,000	ip
Method Blank	<50	93

d - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/04/02
Date Received: 11/27/02
Project: 9th Avenue Oil Spill
Date Extracted: 11/27/02
Date Analyzed: 11/27/02

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M

Extended to Include Motor Oil Range Compounds

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Diesel Extended (C10-C36)	Surrogate (% Recovery) (Limit 45-147)
MORIVER 002 d 211192-01	4,200,000	ip
Method Blank	<250	93

d - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For: Volatile Compounds By EPA Method 8260B

Client Sample ID:	MORIVER 003	Client:	Tetra Tech EM Inc.
Date Received:	11/27/02	Project:	9th Avenue Oil Spill
Date Extracted:	11/27/02	Lab ID.	211192-06
Date Analyzed:	11/30/02	Data File:	112751.D
Matrix:	Water	Instrument:	5972 -Ins
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	102	89	111
1,2-Dichloroethane-d4	96	82	116
Toluene-d8	98	84	114
4-Bromofluorobenzene	105	85	127

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<1
o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1
Hexane	<10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	Tetra Tech EM Inc.
Date Received:	11/27/02	Project:	9th Avenue Oil Spill
Date Extracted:	11/27/02	Lab ID:	02-910 mb
Date Analyzed:	11/30/02	Data File:	112749.D
Matrix:	Water	Instrument:	5972 -Ins
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	101	89	111
1,2-Dichloroethane-d4	94	82	116
Toluene-d8	96	84	114
4-Bromofluorobenzene	109	85	127

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<1
o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1
Hexane	<10

12/04/02 12:47pm P. 011

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/04/02
Date Received: 11/27/02
Project: 9th Avenue Oil Spill

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING EPA METHOD8015M

Laboratory Code: 211173-20 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/L (ppb)	150	130	14

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Gasoline	µg/L (ppb)	1,000	101	99	82-120	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/04/02
Date Received: 11/27/02
Project: 9th Avenue Oil Spill

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	µg/L (ppb)	2,500	95	101	71-128	6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/04/02
Date Received: 11/27/02
Project: 9th Avenue Oil Spill

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING EPA METHOD 8015M

Laboratory Code: 210217-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Diesel Extended	µg/L (ppb)	260	200	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	µg/L (ppb)	2,500	90	100	71-128	7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/04/02
Date Received: 11/27/02
Project: 9th Avenue Oil Spill

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: *Laboratory Control Sample*

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
1,1-Dichloroethene	µg/L (ppb)	50	116	113	76-145	3
Benzene	µg/L (ppb)	50	100	102	81-123	2
Trichloroethene	µg/L (ppb)	50	92	93	68-130	1
Toluene	µg/L (ppb)	50	88	89	81-116	1
Chlorobenzene	µg/L (ppb)	50	91	91	85-116	0
Hexane	µg/L (ppb)	50	77	77	50-150	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/04/02
Date Received: 11/27/02
Project: 9th Avenue Oil Spill

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR ETHERS BY EPA METHOD 8260B

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 2(
Methyl t-butyl ether (MTBE)	µg/L (ppb)	50	118	118	65-135	0